

CLAIMS:

1. A base station connected to a wired LAN (Local Area Network), comprising:
 - a wired communication unit connected to said wired LAN;
 - a wireless communication unit that communicates with a LAN terminal via a radio wave; and
 - a controller that detects a first device issuing a radio wave in a first frequency band, said first device being in a coverage area of the base station,
 - wherein said controller sets up a second frequency band as a band to be used, said second frequency band being different from said first frequency band.
2. The base station according to claim 1, wherein said first device is another base station connected to the wired LAN.
3. The base station according to claim 2, wherein said controller sends a radio signal in the second frequency band, which has been set up, to said another base station.
4. The base station according to claim 1, wherein said first device is a wireless terminal that communicates, via a radio wave, with another base station connected to said wired LAN.
5. The base station according to claim 4, wherein said controller sends a radio signal in the

second frequency band, which has been set up, to said another base station.

6. The base station according to claim 1, further comprising:

a storage unit in which various types of information is stored,

wherein said controller creates communication status information on the first frequency band and said storage unit stores therein the communication status information.

7. The base station according to claim 1, wherein said radio communication unit communicates with said wireless terminal using a direct sequence method.

8. A base station comprising:

a wired interface connected to a wired LAN;

a wireless interface that communicates with other wireless terminals; and

a controller that detects a surrounding communication environment using said wireless interface,

wherein said controller sends information on a first frequency band to be used to another wireless device in the surrounding communication environment detected by said controller, said first frequency band being set up by said controller.

9. The base station according to claim 8, wherein the first frequency band to be used is reset to a second frequency band to be used in response to a

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request from said an other wireless device.

10. The base station according to claim 8, wherein said base station sends the information on the first frequency band to be used to the an other wireless device according to a predetermined priority, said information being set up by said base station.

11. A method for setting up a frequency band to be used for use in a first base station which comprises a wired communication unit connected to a wired LAN and a wireless communication unit communicating with a first wireless terminal via a radio wave, said method comprising the steps of:

checking if, with the use of said wireless communication unit, there is a first device that outputs a radio wave in a wireless coverage area of said first base station; and

if there is the first device, setting up a frequency band, which is different from the frequency band of the radio wave output by said first device, as the frequency band to be used.

12. The method for setting up a frequency band to be used according to claim 11, wherein the first device is a second base station connected to the wired LAN.

13. The method for setting up a frequency band to be used according to claim 12, further comprising the step of sending information on the frequency band to be used that is set in the second base station.

14. The method for setting up a frequency band to

be used according to claim 11, wherein said first device is a wireless terminal that communicates, via radio waves, with other base stations connected to the wired LAN.

15. The method for setting up a frequency band to be used according to claim 14, further comprising the step of sending information on the frequency band to be used that is set in the second base station.

16. The method for setting up a frequency band to be used according to claim 11, further comprising the steps of:

creating communication status information on the first frequency band by a controller of the first base station; and

storing the communication status information in a storage unit of the first base station,

wherein the second frequency band is set up as the frequency band to be used according to the communication status information.

17. The method for setting up a frequency band according to claim 11, wherein the method is used by said wireless communication unit that communicates with the wireless terminal in a direct sequence method.

18. A base station connected to a wired LAN, comprising:

a wired communication unit connected to the wired LAN;

a wireless communication unit that communi-

cates with a LAN terminal via radio waves; and

a controller that creates first information on a first frequency band for use in communicating with the LAN terminal and second information on the LAN terminal,

wherein said base station sends the first information and the second information to another base station connected to the wired LAN.

19. For use in a base station which comprises a wired connection unit connected to a wired LAN and a wireless communication unit communicating with a LAN terminal via radio waves, a method for setting up a frequency band of radio waves to be used by said wireless communication unit, said method comprising the steps of:

finding frequency bands which belong to a predetermined plurality of frequency bands and which are already used by other devices in a place where the base station is installed; and

setting up a frequency band not used by the other devices as a frequency band to be used by the wireless communication unit.

20. The method for setting up a frequency band to be used by a base station according to claim 19, wherein said step of finding frequency bands is executed by said wireless communication unit scanning the radio waves of the plurality of frequencies for detecting frequency bands used.

21. The method for setting up a frequency band to be used by a base station according to claim 19, wherein the base station communicates with the wireless LAN terminal using a direct sequence method.

22. The method for setting up a frequency band to be used by a base station according to claim 19, further comprising the step of creating and retaining a table based on a result of said step of finding frequency bands, said table containing at least information identifying the other devices that were found and frequency bands to be used by the devices.

23. The method for setting up a frequency band to be used by a base station according to claim 22, further comprising the step of sending said table to other base stations connected to said wired LAN.

24. The method for setting up a frequency band to be used by a base station according to claim 23, wherein the base station updates the table thereof based on the table received from some other base stations.

25. The method for setting up a frequency band to be used by a base station according to claim 19, wherein said plurality of frequency bands are 13 frequency bands ranging from 2.4G Hz to 2.947G Hz.

26. The method for setting up a frequency band to be used by a base station according to claim 19, further comprising the step of, when it is found in said step of finding frequency bands that the predeter-

mined plurality of frequency bands are all used by other devices, indicating that there is no frequency band available to the base station.

27. The method for setting up a frequency band to be used by a base station according to claim 26, wherein a fact that there is no available frequency band is visually output.

28. The method for setting up a frequency band to be used by a base station according to claim 19, wherein, if it is found that, after setting up a frequency band to be used by the base station in said step of setting up a frequency band, there is another device using the frequency band, the frequency band to be used is changed to another frequency band.

29. For use in a base station which comprises a wired connection unit connected to a wired LAN and a wireless communication unit communicating with a LAN terminal via radio waves, a method for setting up a frequency band of radio waves to be used by said wireless communication unit, said method comprising the steps of:

finding a first frequency band which belongs to a predetermined plurality of frequency bands and which is not used by other devices in a place where the base station is installed; and

setting up the first frequency band as a frequency band to be used by the wireless communication unit.

30. The method for setting up a frequency band to be used by a base station according to claim 29, wherein said step of finding a frequency band is executed by said wireless communication unit scanning the radio waves of the plurality of frequency bands for detecting frequency bands used.

31. The method for setting up a frequency band to be used by a base station according to claim 29, further comprising the step of creating and retaining a table based on a result of said step of finding a frequency band, said table containing at least information identifying the other devices that were found and frequency bands to be used by the devices.

32. The method for setting up a frequency band to be used by a base station according to claim 29, wherein the plurality of frequency bands are 13 frequency bands ranging from 2.4G Hz to 2.947G Hz.

33. The method for setting up a frequency band to be used by a base station according to claim 29, further comprising the step of, when it is found in said step of finding a frequency band that the predetermined plurality of frequency bands are all used by other devices, indicating that there is no frequency band available to the base station.

34. The method for setting up a frequency band to be used by a base station according to claim 33, wherein a fact that there is no available frequency band is visually output.

35. The method for setting up a frequency band to be used by a base station according to claim 29, wherein, if it is found that, after setting up a frequency band to be used by the base station in said step of setting up a frequency band, there is another device using the frequency band, the frequency band to be used is changed to another frequency band.

36. For use in a base station which comprises a wired connection unit connected to a wired LAN and a wireless communication unit communicating with a LAN terminal via radio waves, a method for setting up a frequency band of radio waves to be used by said wireless communication unit, said method comprising the steps of:

finding frequency bands which belong to a predetermined plurality of frequency bands and which are received by other devices in a place where the base station is installed; and

setting up a frequency band not used by the other devices as a frequency band to be used by the wireless communication unit.